CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.02/KRIDL/CSR-06/063g/CEMENT/2016-17 Date: 13.06.2016

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer**, Yelahanka Sub Division, BBMP, Bangalore.
*AGENCY	:	**Technical Manager (West),** KRIDL, Bangalore.
*NAME OF THE WORK	:	Construction of Compound wall at pump house in Ward No.02, BBMP, Bangalore.
*REFERENCE	:	BBMP/EE(YNK.D)/W.O/81/2016-17 Dated: 08.06.2016
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	11.06.2016
PERIOD OF TESTING	:	11.06.2016 to 13.06.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	135 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	475 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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T-2377

Job No.: CTCE/BBMP/W.No.02/KRIDL/CSR-06/063g/SAND-Gradation/2016-17 : 13.06.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	: Construction of Compound wall at pump house in Ward No.02, BBMP, Bangalore.
Reference	: BBMP/EE(YNK.D)/W.O/81/2016-17 Dated: 08.06.2016
Technical Reference	: IS : 2386 Part 1 - 1963 RA-2007
Sample ID	: Fine Aggregates
Sample Received on	: 11.06.2016
Date of Testing	: 13.06.2016

Total Wt. of Aggregates in gms 1000

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	96.00	90-100	90-100	90-100	95-100
2.36	79.50	60-95	75-100	85-100	95-100
1.18	58.50	30-70	55-90	75-100	90-100
600 Micron	30.50	15-34	35-59	60-79	80-100
300 Micron	14.00	5-20	8-30	12-40	15-50
150 Micron	6.00	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-1 specific limits.

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Job No.: CTCE/BBMP/W.No.02/KRIDL/CSR-06/063g/AGG/GR/2016-17 : 13.06.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	: Construction of Compound wall at pump house in Ward No.02, BBMP, Bangalore.
Reference	: BBMP/EE(YNK.D)/W.O/81/2016-17 Dated: 08.06.2016
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm)
Sample Received on	: 11.06.2016
Date of Testing	: 13.06.2016

Total Wt. of Aggregates in gms= **7000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.64	95-100	85-100
20	33.36	30-70	0-20
10	11.93	10-35	0-5
4.75	2.21	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.02/KRIDL /STEEL/2016-17 13.06.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer**, Yelahanka Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
Name of the Work	:	Construction of Compound wall at pump house in Ward No.02, BBMP, Bangalore.
Reference	:	BBMP/EE(YNK.D)/W.O/81/2016-17 Dated: 08.06.2016
Date of Test	:	13.06.2016
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	513	556	13.25	O.K	O.K

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Job No.: CTCE/BBMP/W.No.02/KRIDL/MS Angle/2016-17 20.06.2016

TEST REPORT ON STRUCTURAL STEEL

Customer : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of work : Construction of Compound wall at pump house in Ward No.02, BBMP, Bangalore.

Reference : BBMP/EE(YNK.D)/W.O/81/2016-17 Dated: 08.06.2016

Samples ID : Samples Supplied By Agency

Specimen Size : ISA-65X65X6mm (1m Length)

Sl.No	Description	Result
1	Thickness	6.04 mm
2	Width	65.0 mm
3	Weight / Meter	5.90 Kg

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Job No.: CTCE/BBMP/W.No.02/KRIDL/MS Pipe/2016-17 20.06.2016

TEST REPORT ON M.S PIPE (38mm Dia)

Customer : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Technical Manager (West),** KRIDL, Bangalore.

Name of work : Construction of Compound wall at pump house in Ward No.02, BBMP, Bangalore.

Reference : BBMP/EE(YNK.D)/W.O/81/2016-17 Dated: 08.06.2016

Specimen Size : M.S Pipe 38mm Dia

PHYSICAL TEST

Sl.No	Description	Result
1	Thickness	2.04 mm
2	Inner Diameter	38.20 mm
3	Outer Diameter	42.28 mm
4	Weight / Meter	1.890 kg

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T-2377

Job No.: CTCE/BBMP/W.No.02/KRIDL/CSR-06/063g/CUBE/2016-17 14.07.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

* Agency : **Technical Manager (West),** KRIDL, Bangalore.

* Name of the work : Construction of Compound wall at pump house in Ward No.02, BBMP, Bangalore.

* Reference : BBMP/EE(YNK.D)/W.O/81/2016-17 Dated: 08.06.2016

* Sample ID : Drain Covering Slab Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

* Grade of Concrete : M_{30}

Compressive Strength as on : 28th day

Sample Received on : 14.07.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	16.06.2016	14.07.2016	8.139	479.3	21.30
2	16.06.2016	14.07.2016	8.265	502.2	22.32
3	16.06.2016	14.07.2016	8.310	510.2	22.68

* Information is furnished by the Customer/Representative

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Job No.: CTCE/BBMP/W.No.02/KRIDL/CSR-06/063g/CUBE/2016-17 19.07.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

* Agency : **Technical Manager (West),** KRIDL, Bangalore.

* Name of the work : Construction of Compound wall at pump house in Ward No.02, BBMP, Bangalore.

* Reference : BBMP/EE(YNK.D)/W.O/81/2016-17 Dated: 08.06.2016

* Sample ID : Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

* Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 19.07.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.06.2016	19.07.2016	8.258	479.3	21.30
2	21.06.2016	19.07.2016	8.325	502.4	22.33
3	21.06.2016	19.07.2016	8.475	512.2	22.76

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TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

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* Agency : **Technical Manager (West),** KRIDL, Bangalore.

* Name of the work : Construction of Compound wall at pump house in Ward No.02, BBMP, Bangalore.

* Reference : BBMP/EE(YNK.D)/W.O/81/2016-17 Dated: 08.06.2016

* Sample ID : Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

* Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 19.07.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	21.06.2016	19.07.2016	8.099	479.3	21.30
2	21.06.2016	19.07.2016	8.197	502.2	22.32
3	21.06.2016	19.07.2016	8.259	513.6	22.83

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TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

* Agency : **Technical Manager (West),** KRIDL, Bangalore.

* Name of the work : Construction of Compound wall at pump house in Ward No.02, BBMP, Bangalore.

* Reference : BBMP/EE(YNK.D)/W.O/81/2016-17 Dated: 08.06.2016

* Sample ID : Pavement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

* Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 20.07.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.06.2016	20.07.2016	8.125	480.3	21.35
2	22.06.2016	20.07.2016	8.289	495.5	22.02
3	22.06.2016	20.07.2016	8.314	502.1	22.32

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* Customer : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

* Agency : **Technical Manager (West),** KRIDL, Bangalore.

* Name of the work : Construction of Compound wall at pump house in Ward No.02, BBMP, Bangalore.

* Reference : BBMP/EE(YNK.D)/W.O/81/2016-17 Dated: 08.06.2016

* Sample ID : Pavement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

* Grade of Concrete : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 20.07.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	22.06.2016	20.07.2016	8.199	500.6	22.25
2	22.06.2016	20.07.2016	8.268	502.2	22.32
3	22.06.2016	20.07.2016	8.345	519.3	23.08

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